

b) Amendments to the Claims

Kindly amend claims 1, 12, 15 and 26 as follows. A detailed listings of all the claims in the application has been provided.

--1. (Currently Amended) A method for manufacturing a piezoelectric film type actuator having a piezoelectric film and an oscillating plate structural member bonded therefor comprising in this order the following steps of:

(a) forming a piezoelectric film a first precursor layer of a material capable of becoming porous upon a firing step on an intermediate transfer member;

(b) forming a second precursor layer comprising a material of said piezoelectric film on said first precursor layer;

(c) forming said piezoelectric film by firing said second precursor layer;

(d) bonding the piezoelectric film on said intermediate member and to said oscillating plate structural member; and

(e) peeling off said intermediate transfer member from said piezoelectric film.

2. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein said piezoelectric film contains lead, titanium, and zirconium.

3. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein said piezoelectric film is patterned.

4. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein the surface roughness Ra of said piezoelectric film is 0.01 μm to 2.5 μm .

5. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein in the step of bonding the piezoelectric film and the oscillating plate structural member, said piezoelectric film and said oscillating plate structural member are bonded by means of energized heating, low temperature heating, or energized contact under pressure through single metal, alloy, metal oxide, metal nitride, or metallic compound.

6. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein in the step of peeling off the intermediate transfer member from the piezoelectric film, said intermediate transfer member is peeled off by the irradiation of laser beam from the intermediate transfer member side.

7. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 6, wherein said laser beam is an excimer laser beam.

8. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 6, wherein said laser beam is an infrared laser beam.

9. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 7, wherein the transmissivity of 230 to 260 nm wavelength of said intermediate transfer member is 20% or more.

10. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 8, wherein the transmissivity of 700 nm to 1,250 nm wavelength of said intermediate transfer member is 20% or more.

11. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein in the step of peeling off an intermediate transfer member from a piezoelectric film, a fluid flux is discharged between the intermediate transfer member and the piezoelectric film to peel off said intermediate transfer member.

12. (Currently Amended) A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein ~~a porous~~ said first precursor layer becomes a porous layer by said firing of said second precursor layer in said step (c) layer is formed between the intermediate transfer member and the piezoelectric film.

13. (Original) A method for manufacturing a piezoelectric film type actuator according to Claim 12, wherein said porous layer contains metal oxide.

14. (Original) A piezoelectric film type actuator manufactured by the method for manufacturing a piezoelectric film type actuator according to Claim 1.

15. (Currently Amended) A method for manufacturing a liquid discharge head provided with a base plate portion having liquid discharge ports; liquid chambers connected with said liquid discharge ports; and a piezoelectric film type actuator formed by a piezoelectric film and a an oscillating plate provided for a part of said liquid chambers, for discharging liquid from the liquid discharge ports by means of the flexural oscillation of said piezoelectric film type actuator, comprising in this order the following steps of:

(a) forming a first precursor layer of a material capable of becoming porous upon a firing step ~~a piezoelectric film~~ on an intermediate transfer member;

(b) forming a second precursor layer comprising a material of said piezoelectric film on said first precursor layer;

(c) forming said piezoelectric film by firing said second precursor layer;

(d) bonding the piezoelectric film ~~on said intermediate member~~ and to said oscillating plate structural member; and

(e) peeling off said intermediate transfer member from said piezoelectric film.

16. (Original) A method for manufacturing a liquid discharge head according to Claim 15, wherein said piezoelectric film contains lead, titanium, and zirconium.

17. (Original) A method for manufacturing a liquid discharge head according to Claim 15, wherein said piezoelectric film is patterned.

18. (Original) A method for manufacturing a liquid discharge head according to Claim 15, wherein the surface roughness Ra of said piezoelectric film is 0.01 μm to 2.5 μm .

19. (Original) A method for manufacturing a liquid discharge head according to Claim 15, wherein in the step of bonding the piezoelectric film and the oscillating plate structural member, said piezoelectric film and said oscillating plate structural member are bonded by means of energized heating, low temperature heating, or energized contact under pressure through single metal, alloy, metal oxide, metal nitride, or metallic compound.

20. (Original) A method for manufacturing a liquid discharge head according to Claim 15, wherein in the step of peeling off the intermediate transfer member from the piezoelectric film, said intermediate transfer member is peeled off by the irradiation of laser beam from the intermediate transfer member side.

21. (Original) A method for manufacturing a liquid discharge head according to Claim 20, wherein said laser beam is excimer laser beam.

22. (Original) A method for manufacturing a liquid discharge head according to Claim 20, wherein said laser beam is infrared laser beam.

23. (Original) A method for manufacturing a liquid discharge head according to Claim 21, wherein the transmissivity of 230 to 260 nm wavelength of said intermediate transfer member is 20% or more.

24. (Original) A method for manufacturing a liquid discharge head according to Claim 22, wherein the transmissivity of 700 nm to 1,250 nm wavelength of said intermediate transfer member is 20% or more.

25. (Original) A method for manufacturing a liquid discharge head according to Claim 15, wherein in the step of peeling off an intermediate transfer member from a piezoelectric film, a fluid flux is discharged between the intermediate transfer member and the piezoelectric film to peel off said intermediate transfer member.

26. (Currently Amended) A method for manufacturing a liquid discharge head according to Claim 15, wherein ~~a porous layer is formed between the intermediate transfer member and the piezoelectric film~~ said first precursor layer becomes a porous layer by said firing of said second precursor layer in said step (c).

27. (Original) A method for manufacturing a liquid discharge head according to Claim 26, wherein said porous layer contains metal oxide.

28. (Original) A liquid discharge head manufactured by the method for manufacturing a liquid discharge head according to Claim 15.--